Short guide to FEROS observations (as of August 2009)

About this document:

- This document does not aim at providing full information about FEROS. Please read the FEROS webpage and the FEROS manual at:

  http://www.eso.org/sci/facilities/lasilla/instruments/feros/
  http://www.eso.org/sci/facilities/lasilla/instruments/feros/doc/

- These pages only cover the very basic steps to start any observations with FEROS.

Calibrations:

- You are responsible yourself for the completeness of your calibrations. An observatory employee will be available to run those calibrations you ask for. Please come to the control building each afternoon on which you need calibrations to be taken. It is your responsibility to check the calibration results.
- Calibration observing blocks (OBs) for FEROS exist already at the telescope (cf. the FEROS user manual about their content). Only if you have special calibration requirements, you may want to prepare your own calibrations.
- FEROS data can be taken in various readout modes (slow, normal, fast) and in different binnings (1x1, 2x2). For 99% of all targets, the normal readout in binning 1x1 is the best choice. The calibrations you take need to match the readout mode and binning of your science data.
- The FEROS pipeline cannot distinguish different readout modes, while it can distinguish different binnings only if the calibration OB "100 FEROS DHC ThAr+Ne" was run in the afternoon.
- Be careful with mixing different readout modes during one night, if you wish to have pipeline processed quick-look data. The FEROS pipeline will process all files according to the readout mode by which it was started up in the afternoon. Those files which may have been obtained in a different readout mode need then to be re-reduced at your home institute with the offline FEROS pipeline, available at this webpage:

  http://www.eso.org/sci/facilities/lasilla/instruments/feros/tools/DRS/

- At the end of your calibrations and prior to taking any science data, you need to check whether the FEROS setup matches your expectations, i.e. you need to check the order tracing and the quality of the wavelength calibration. These results are displayed on the computer w2p2off (the very left one at the telescope console). A short guide how to interpret the setup results can be found here:

  http://www.eso.org/sci/facilities/lasilla/instruments/feros/doc/qc-plots.html

- It takes the computer about 10 minutes to display the setup results for the calibration OB "100 FEROS DHC ThAr+Ne", while it may take up to 40 minutes for the OBs "9*0 StanCal * " due to extensive calculations.

Data on the offline computer 'w2p2off':

- The offline computer w2p2off (to the very left of the telescope console) is for your personal use, e.g. web browsing or reading your email.
- Please leave your own files only in /data/reduced/Visitor/<your-name>. Do not put FITS files in the home partition, as this partition has very limited disk space and doing so will cause a disk space overrun! Keep your visitor directory reasonably sized (few GBs); there is definitely no need to copy all the raw data there again !
- Delete this directory on the day when you will leave.
- A backup of your visitor directory would be your responsibility. These visitor directories may get deleted as soon as a visitor has left La Silla.

- There is in total up to 500 GB of free disk space for the automatically incoming FITS data (or less, depending on the amount of old data which is kept). We have CRON scripts for managing the disk space of the incoming FITS files, which prevent that the disk will fill up to 100%. By deleting the oldest nights of data on the disk, these scripts will maintain a disk quota always around 90-97%. For observing runs lasting longer than a week, it may in general not be possible to keep all data on w2p2off, but you will receive all data on portable media at the end of your observing run.
- Visiting astronomers do not need to manage the disk space on w2p2off themselves, but just in case that there should occur any disk space emergency, we list in the following where data could be safely removed:

- /data/raw/<date> is a copy of the raw frames. The visitor backup of raw data is created from another separate machine. Thus, data in this directory could be safely deleted after some days.
- /data/reduced/<date> contains final FEROS TAR packages which are included in the VA backup. We recommend not to modify or delete files in this directory. Once you look into the TAR files, you may want to know which files represents what. This is described in the file name convention of FEROS data:

  http://www.eso.org/sci/facilities/lasilla/instruments/feros/tools/DRS/

- /data/reduced/FEROS/<date> contains intermediate files of the FEROS pipeline. These directories can get huge. Data of previous nights are usually no longer required and could be removed when the disk space is short. No backup of these directories is made, because the relevant results go into the above mentioned FEROS TAR files. The FEROS file names are explained in the above link, and in further detail at the bottom of the FEROS DRS README:

  http://www.eso.org/sci/facilities/lasilla/instruments/feros/tools/DRS/FEROS-DRS/README

- In case that you may decide to delete some nights of data in /data/raw/<date>, then please delete the same nights also in /data/reduced/FEROS/<date> (this is required in order that the automatic deletion scripts run optimally).
- Note that the available graphical disk space tool does not automatically update the disk space unless you would click on "update". Alternatively, you can better check the disk quota with "df -k" or "df -h".

Data backup:

- If you wish to receive a copy of your data on portable media at the end of your run, you need to fill in a "data backup request" at the first night of your run. A link to this is available on:

  http://www.eso.org/sci/facilities/lasilla/sciops/

- **If you observe programs for more than one PI or for several program IDs, then you need to submit one data backup request for each program ID**.
- Your data are usually left at the hotel reception on the day when you leave La Silla. Eventually, should the data not yet be ready by then, you will receive the data by letter mail.

Observing with p2pp:

- Ideally, you may have prepared your observing blocks (OBs) already before coming to La Silla, while updates and revisions of your OBs are still possible at the observatory. The followings pages (and links therein) provide you with the information how to create your OBs:

  http://www.eso.org/sci/observing/phase2/VMGuidelines.html
  http://www.eso.org/sci/observing/phase2/P2PP/P2PPTool.html

- On the first day of your observations, the OBs need to be copied to the computer w2p2dhs (the second from the left at the telescope console) prior to your first calibrations. Please put all OBs only in this directory:

  visitor@w2p2dhs:/home/visitor/p2pp-impex/<your-name>

- **Please execute all your science OBs <u>ONLY</u> under the observing program ID that was exclusively assigned to you for this run.** Use of other or older run IDs may cause software hiccups, temporary data losses and other bad things.
- If you cannot find your program ID in p2pp, click on "File" -> "Download/Refresh Observing Runs".
- If you are observing for two programs with two different run IDs, **you <u>must login</u> into the other p2pp account when switching programs, to preserve correct ownership (PI) of the data**, unless both PIs have agreed to merge their data. The program ID under which an OB is executed will define the "ownership" of the data!

Further reading:

- Please read also the afore mentioned documents and webpages.
- When things may fail during your observations, hints&tips about some frequent questions and problems are shown on the following page (observatory-internal access only). <u>Do not take these steps yourself</u>, because detailed knowledge may be necessary, but ask an observatory employee for assistance:

  http://www.eso.org/sci/facilities/lasilla/sciops/team_only/feros/HintsAndTips.html

At the end of your observing run:

- You are invited to complete an end-of-mission report when your observing run has ended. A link to this form is available from the webpage:

  http://www.eso.org/sci/facilities/lasilla/sciops/